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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/591,702

04/16/2007

Andries Gerhardus Johannes Vermeulen

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EXAMINER

KIKNADZE, IRAKLI

ART UNIT

PAPER NUMBER

2882

NOTIFICATION DATE

DELIVERY MODE

05/05/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com

Office Action Summary	Application No. 10/591,702	Applicant(s) VERMEULEN ET AL.	
	Examiner IRAKLI KIKNADZE	Art Unit 2882	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17-25 is/are allowed.
- 6) ☒ Claim(s) 26-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/16/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 26-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 26, the phrase "can pass" renders the claim indefinite because it is unclear whether the limitations following the phrase "can" are part of the claimed invention. See MPEP § 2173.05(d).

Claim 27 recites the limitation "the detector" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 31 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite in that it fails to point out what is included or excluded by the claim language. This claim is an omnibus type claim.

Claims 28-30 are rejected by virtue of their dependence.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 26-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Scheid (US Patent 5,164,976).

With respect to claims 26 and 31, Scheid teaches a collimator for adjusting the effective width of an imaging beam generated by a radiation source (82), the collimator (58) comprising: first and second shutter elements arranged side by side to define a slit through which radiation emitted by the source is passing; a drive associated with a motor (72) arranged to move the shutter elements in a direction parallel to the slit; and a guide mechanism comprising first and second tapered surfaces arranged to cooperate with respective tapered surfaces on the first and second shutter elements, so that operation of the drive varies the width of the slit (see abstract; Figs. 3-6; claim 1).

With respect to claim 27, Scheid teaches that the both the shutter elements are arranged to move co-centrally with respect to a centre line that passes through the gap between them, to obtain an optimum umbra to penumbra ratio of the x-ray beam on a detector (see abstract; Figs. 3-6; claim 1).

With respect to claim 28, Scheid teaches that the each shutter element comprises a strip of radiation-opaque material and a supporting body defining the respective tapered surface (Fig. 7; column 7, lines 55-65).

With respect to claim 28, Scheid teaches that the drive comprises a motor and reduction drive with a mechanism arranged to impart linear motion to the shutter elements (see abstract; Figs. 3-6; claim 1).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Scheid (US Patent 5,164,976) as applied to claim 26 above, and further in view of Thomas (US Patent 5,396,534).

With respect to claim 30, Scheid teaches claimed invention except that the drive comprises a solenoid. Thomas teaches an X-ray apparatus comprising a collimator driving mechanism, wherein for moving the collimator parts the apparatus may comprise the equivalent structures known in the art such as a motor with a mechanism arranged to impart linear motion or a solenoid. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the solenoid since the examiner takes Office Notice of equivalence of the motor with a mechanism arranged to impart linear motion and the solenoid for their use in the collimator shutter moving art and the selection of these known equivalents to move the collimator shutters would be within the level of ordinary skill in the art.

Allowable Subject Matter

7. Claims 17-25 are allowed.

8. The following is a statement of reasons for the indication of allowable subject matter:

With respect to claims 17-20, prior art fails to teach or make obvious an imaging apparatus comprising: an adjustable collimator arranged to vary the width of the imaging beam in the scanning direction; and a control system responsive to adjustment of the collimator to combine the output signals of groups of pixels comprising greater numbers of pixels automatically as the collimator is adjusted to increase the width of the imaging beam in the scanning direction, thereby to increase the contrast resolution of the image signals for a given spatial resolution as claimed in combination with all of the remaining limitations of the base claim or any intervening claims.

With respect to claims 21-25, prior art fails to teach or make obvious a method of operating imaging apparatus of the kind having a radiation source and an associated detector which are moveable relative to a subject, the method comprising: adjusting a collimator to vary the width of the imaging beam in the scanning direction; detecting the setting of the collimator; and combining the output signals of groups of two or more pixels according to the setting of the collimator, thereby to optimize a selected characteristic of the image signals as claimed in combination with all of the remaining limitations of the base claim or any intervening claims.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to IRAKLI KIKNADZE whose telephone number is (571)272-2493. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on 571-272-2490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Irakli Kiknadze/
Irakli Kiknadze
Patent Examiner
Art Unit 2882

IK, April 22, 2008